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Date: 10/26/98 2:27 PM
Sender: Greg@Aviosupport.com
TO: 9-NPRM-CMTS
Priority: Normal
Subject: Comments to Docket No. 29318, Notice No. 98-12

I would like to provide the following comments to the above referenced NPRM Docket No. 29318 concerning the proposed prohibition on the transportation of Chemical Oxygen Generators as cargo in aircraft.

1. In every incident involving a chemical oxygen generator noted within the NPRM document (para B, pages 4-6) the devices were improperly handled, assembled, packaged or documented. In some instances the devices were undeclared. While the proposed prohibition could increase awareness of such issues within the airline community it will not prevent to future undeclared shipment of these devices. While the proposed prohibition may result in a reduction of risk, such risk would not be eliminated and other more useful and effective regulatory actions might not be taken.

2. The NPRM (page 11) proposes to consider as a chemical oxygen generator any device that (1) contains chemicals that produce oxygen by chemical reaction and is unused, (2) any such device that has been expended and now contains an inert residue, and (3) newly manufactured containers unfilled with the chemical compound which releases oxygen through chemical reaction. Definitions (1) and (2) are quite logical and can be easily employed throughout this discussion however those components which might be covered under (3) should not be unreasonably restricted from carriage. It is unlikely that such components would have an occasion to be shipped via air however in instances where manufacturers might be confronted by work stoppages due delays in component deliveries then those components should be able to be shipped under their applicable definition and/or description; i.e. metal can, etc.

3. The FAA has requested comment on whether chemical oxygen generators might be manufactured in one location, but charged with chemicals in another. The current typical design of chemical oxygen generators is such that the device must be filled as part of the assembly process thus the practicality of sending a completed but unfilled device to another location is very limited. At the present time there are only three manufacturers worldwide who are producing chemical oxygen generators for aircraft use. All three firms are suppliers to Production Approval Holders and two companies supply parts under FAA-PMA, while the third supplies under JAA. Detail information about these products and the associated manufacturing processes should thus be readily available to the FAA.

The FAA should also keep in mind that there are chemical oxygen generators manufactured for industries other than aviation and efforts should be made to understand the current scope of products and how these products might also be more effectively controlled as concerns possible air shipment.

4. The FAA has expressed concern over the ability of shippers or users to determine if the chemical oxygen generator has been previously discharged (page 14-15). Obviously part of the answer to this question is with any accompanying airworthiness documentation and the adherence by air carriers and repair stations of good maintenance practices as concerns parts removed from aircraft during scheduled maintenance.

When a chemical oxygen generator is activated the chemical reaction produces heat and the outer container reaches a relatively high temperature. It is certainly within current technology to have chemical oxygen generators marked with a temperature sensitive paint that would clearly display the word "DISCHARGED' if a certain case temperature has been exceeded. This would also remove the element of human error in trying to visually determine the condition or status of a chemical oxygen generator. The paint band could read "ACTIVE" until the requisite temperature had been reached.

5. The NPRM document contains extensive discussion on the issues of transporting "expired" or "discharged" chemical oxygen generators. At the present time there is no fault free method to determine of a chemical oxygen generator as been discharged thus for the purposes of shipment is should be considered to be "active". As there is little financial motivation to ship "scrap" via air I would expect that any shipper would want to make this determination before undertaking to associated costs with packaging and documentation for an air shipment. A chemical oxygen generator that is simply time expired should be considered to be "active" for the purposes of handling and shipping. As such items are "unairworthy" I would strongly suggest that rather than concern itself solely with the possible shipment of 'expired" but "active" devices the FAA should make it a requirement of the maintenance organization who has removed the expired unit from an aircraft or from an inventory to activate the device and render it 'discharged" and thus safe.

6. Under "Costs" (page 23) the FAA has made the statement that, 'it is unlikely that the newly manufactured devices would be shipped by air as they have little or no economic value'. This is accurate with one major exception. Whenever an aircraft suffers a decompression, and they occur regularly, all of the chemical oxygen generators must be replaced to return the aircraft to service. Many airlines do not keep "AOG" stocks of chemical oxygen generators thus when a requirement arises for a complete shipset of devices it falls to the manufacturers, or their authorized distributors, to provide this material on a rapid basis. In almost every case it requires shipment by air.

7. General Comments:

a. It is within current technology to develop an external marking system that would clearly indicate to any observer if the subject device was "active" or had been "discharged".

b. It is within current technology to develop reusable packaging that could be used to transport active chemical oxygen generators and protect them from most heat sources that could be adequate to trigger a chemical reaction of the devices contents.

c. There should be uniform FAA specified marking requirements for chemical oxygen generators that shows on the exterior of the device the expiration date by month and year or alternatively quarter and year.

d. Regulations alone will not make a major impact to eliminate the possibility of human error in handling these devices. Identified problems in handling these devices should be also addressed within the scope of existing technology to clearly mark the devices, identify the status of the device; i.e. "active" or "discharged", provide the safest means of packaging for shipment in both protecting the devices from outside damage or from the devices potentially impacting other cargo.

Respectfully submitted,

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